

**HF-STD-006A**  
**June 15, 2014**



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

**U.S. Department of Transportation**

**Federal Aviation Administration**

**Standard Practice**

**Technical**

**Operations Abbreviations Standard**

## FOREWORD

1. This standard is approved for use by all Departments of the Federal Aviation Administration (FAA).
2. This standard covers the format and content requirements for developing and using FAA Technical Operations abbreviations.
3. This standard specifies requirements that shall be adhered to in the development of new abbreviations or use of authorized abbreviations.
4. This standard applies to all FAA acquisitions subsequent to the date of this standard.
5. This standard has been prepared in accordance with FAA-STD-068 U.S Department of Transportation Federal Aviation Administration, *Preparation of Standards* (December 2009).
6. Comments, suggestions, or questions on this document should be addressed to:

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## **1 SCOPE**

### **1.1 Scope**

This standard establishes the format and content requirements for developing and using abbreviations in the FAA Technical Operations environment.

### **1.2 Purpose**

The purpose of this standard is to promote consistent use of abbreviations on Technical Operations hardware and software. This standard prescribes—

- a. The use of authorized abbreviations, and
- b. Guidelines for creating new abbreviations.

### **1.3 Applicability**

This standard applies to the use of abbreviations on permanent markings, labels, and electronic displays associated with Technical Operations hardware and software.

## **2 APPLICABLE DOCUMENTS**

### **2.1 General**

The documents listed in this section are specified in sections 4 or 5 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they shall meet all specified requirements of documents cited in sections 4 or 5 of this standard, whether or not they are listed.

### **2.2 Government documents**

#### **2.2.1 Specifications, standards, and handbooks**

The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

##### **2.2.1.1 STANDARDS**

None

##### **2.2.1.2 SPECIFICATIONS**

None

### 2.2.1.3 UNITED STATES GOVERNMENT PRINTING OFFICE

#### United States Government Printing Office (GPO) Style Manual

(Copies of this document are available online from the U.S. Government Printing Office at [www.access.gpo.gov](http://www.access.gpo.gov).)

### 2.3 Non-Government publications

The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

#### INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE 260.1 - Standard Letter Symbols for Units of Measurement (SI Units, Customary Inch-Pound Units, and Certain Other Units)

(Copies of this document are available online at [www.ieee.org](http://www.ieee.org).)

#### AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME Y14.38 - Abbreviations and Acronyms for Use on Drawings and Related Documents

(Copies of this document are available online at [www.asme.org](http://www.asme.org).)

### 2.4 Order of precedence

In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

## 3 DEFINITIONS

### 3.1 Terms and definitions

**3.1.1 Abbreviation.** An abbreviation is a shortened version of a word or group of words formed by omitting one or more letters.

**3.1.2 Acronym.** An acronym is a word formed from the initial letter or letters of a group of words. Acronyms are pronounced as words. For example, local area network is pronounced as “LAN”, not “L-A-N”. Acronyms are a form of abbreviations.

**3.1.3 Clippings.** A clipping is formed from removing vowels and/or consonants from the beginning and/or ending of a word. A clipping is also known as "truncation" or "shortening". For example, cable (cablegram) or phone (telephone). Clippings are a form of abbreviations.

**3.1.4 Contraction.** A contraction is formed by omitting one or more vowels or consonants in a word or phrase to maintain a flowing sound. The result may be a new word as in don't (formed from "do not") or what's (formed from "what is"). Contractions are a form of abbreviations.

**3.1.5 Initialism.** An initialism is formed from initials and pronounced as a series of letters. For example the abbreviation for very high-frequency omni-directional range is pronounced "V-O-R", not "VOR". Initialisms are a form of abbreviations.

**3.1.6 Phonetic sound.** A Phonetic sound is alphabetic use of vowels and consonants that mimic the sound produced when pronouncing the abbreviated word or phrase.

### **3.2 Key word usage**

**3.2.1 Shall.** The key word "shall" is used to denote required action (requirement language). The word "should" is used to denote a best practice (guidance language).

**3.2.2 Abbreviations.** This standard uses the term "abbreviation" as a collective term for acronyms, initialisms, contractions, and clippings.

### **3.3 Abbreviations used in this document**

ASME	American Society of Mechanical Engineers
FAA	Federal Aviation Administration
GPO	Government Printing Office
IEEE	Institute of Electrical and Electronics Engineers

## **4 GENERAL REQUIREMENTS**

This section prescribes requirements and design criteria for Technical Operations abbreviations.

### **4.1 General**

The following general design rules shall apply to Technical Operations abbreviations:

- a. When possible, word(s) or phrases should be fully spelled out.
- b. Abbreviations should be used only when space is limited and the word(s) cannot be spelled out.

- c. Abbreviations should be avoided in feedback messages on electronic displays.
- d. Use of abbreviations and definitions shall be in accordance with the List of Authorized Abbreviations.
- e. Use of abbreviations and definitions not found in the List of Authorized Abbreviations shall be in accordance with ASME Y14.38 or GPO Style Manual.
- f. New abbreviations shall be developed using the requirements contained herein.

#### **4.2 Clarity and distinctness**

The following clarity and distinctness rules shall apply to Technical Operations abbreviations:

- a. When the abbreviation of a word is not clear or may be misinterpreted, the entire word shall be used.
- b. The definitions for all abbreviations used should be available to the user.
- c. The same abbreviation shall not be used to identify two or more displays, controls, or panels when these are not functionally identical.

#### **4.3 Technical documentation**

The following technical documentation rules shall apply to Technical Operations abbreviations:

- a. The first time an abbreviation is used in text, it shall be placed in parentheses and shall be preceded by the word or term spelled out in full. For example, circuit (CKT) and frequency converter (FREQ CONV). This provision does not apply to:
  - (1) Abbreviations used for the first time in tables, figures, or equations.
  - (2) Abbreviations for points of the compass.
  - (3) Standard abbreviations for geographical locations.
  - (4) Standard dictionary abbreviations.
  - (5) Abbreviations for types of weather phenomena used by aerologists and meteorologists.
  - (6) Abbreviations of commonly used international metric terms.

b. Abbreviations used on figures and in tables, but not defined in the text or in any other portion of the text, shall be spelled out in a footnote to the applicable figure or table.

c. Abbreviations in technical documentation shall be identical to abbreviations on hardware and software in terms of spelling, letter case, and character spacing.

#### **4.4 Consistency**

The following consistency rules shall apply to Technical Operations abbreviations:

a. Words shall have only one abbreviation and it shall be consistent. For example, “clear” shall only be abbreviated as CLR.

b. Abbreviations should have only one consistent definition. For example, CLR should only mean “clear”, not “clearance”.

c. The same abbreviations shall be used for all tenses, participle endings, the possessive case, the singular and plural, and the noun and modifying forms of a term. For example, LVL shall be used for level and levels; INHB for inhibit, inhibited, and inhibiting.

#### **4.5 Punctuation marks**

The following punctuation marks rules shall apply to Technical Operations abbreviations.

a. Punctuation marks shall not be used with abbreviations unless—

(1) Specified herein.

(2) Confusion or misinterpretation of the abbreviation would occur.

(3) When it ends a sentence.

b. The punctuation of units of measurement shall conform to IEEE Standard 260.1 and to the GPO Style Manual

#### **4.6 General typography**

**4.6.1 Subscript and superscript.** Abbreviations should not contain subscripts and superscripts.

**4.6.2 Capitalization.** Capital letters shall be used for abbreviations unless convention prescribes the use of lower case letters. For example, the GPO Style Manual prescribes to abbreviate alternating current as "ac", not "AC".

**4.6.3 Plus/minus sign.** A plus or minus sign may substitute the words "plus" or "minus" unless confusion or misinterpretation would occur from the omission of the abbreviated words. For



example, a plus sign may substitute the word "plus" in Dynamic Ocean Track System Plus (DOTS+).

#### **4.7 Separating characters**

**4.7.1 Spacing.** The following spacing rules shall apply to Technical Operations abbreviations:

a. Spaces shall not be inserted within an abbreviation. For example, the word “automatic dependent surveillance” shall be abbreviated as “ADS”, not “A D S”.

b. A minimum of one blank space shall be used to separate blocks of abbreviations. For example, the word "operational baseline" shall be separated as "OP BS".

c. A minimum of one blank space shall be used between a number and its unit. For example, a blank space shall separate 35 and millimeter (35 mm) or 250 and gigahertz (250 GHz).

**4.7.2 Hyphen.** A hyphen shall be used to separate an abbreviation and a unit designator. For example, PCU-A and PCU-B shall be used instead of PCUA and PCUB to represent Power Conditioning Units A and B.

#### **4.8 Numbers**

An abbreviation may include letter and number combination to indicate repetition or pronunciation unless confusion may result from the use of number-letter combination. For example, the number three and the letter “l” may be confused for the number “thirty-one” in Pre-Planned Product Improvement (P3I).

#### **4.9 Prepositions, conjunctions, and articles**

The following prepositions, conjunctions, and articles rules shall apply for Technical Operations abbreviations:

a. Prepositions, conjunctions, and articles shall be omitted when forming abbreviations.

b. The hyphen, slant, or ampersand may be substituted for prepositions, conjunctions, and articles. For example, C/I for correlation and interpolation; A/G for air to ground; and I/O for input or output.

#### **4.10 Word combinations**

Authorized abbreviations of word combinations or grouping, as specified in the List of Authorized Abbreviations, shall be used as such and shall not be separated for use singularly. For example, the word combination A/A means “air-to-air” but the letter A shall not be used singularly to mean “air”. Single word abbreviations may be combined to form abbreviations for new word combinations that are not listed in the List of Authorized Abbreviations provided there is no possibility of misinterpretation and the new abbreviation does not form an

authorized word combination with a different meaning. For example, the abbreviation for “battery” and the abbreviation for “alarm” may be combined to form the word combination “BATT ALM.”

## **5 DETAILED REQUIREMENTS**

### **5.1 Requirements for developing new abbreviations**

The process, as specified herein, shall be adhered to when developing a new abbreviation to be considered for inclusion in Technical Operations hardware and software. Verify that —

- a. The to-be-abbreviated word does not exist in the List of Authorized Abbreviations, ASME Y14.38, or GPO Style Manual.
- b. The proposed abbreviation does not exist in the List of Authorized Abbreviations, ASME Y14.38, or GPO Style Manual.
- c. The phonetic sound or alphabetic similarity of the word is minimally affected.
- d. Where the word(s) cannot be abbreviated with phonetic retention, an abbreviation that is no longer than is necessary to ensure a clear and unambiguous meaning should be used.
- e. The selection of letters to be omitted ensures a difference with existing words or other abbreviations appearing on the specific or adjacent displays, controls, and panels.

### **5.2 Requirements for implementing new abbreviations**

The process, as specified herein, shall be adhered to prior to implementing a new abbreviation.

- a. Proposed abbreviation(s) shall be submitted to Technical Operations Human Factors for approval.
- b. Technical Operations Human Factors approval shall be granted before implementing a new abbreviation.

### **5.3 List of authorized abbreviations**

- a. List of Authorized Technical Operations Abbreviations can be found on the FAA Human Factors Standard web page: <https://www.hf.faa.gov/HFPortalNew/standards.aspx>
- b. List of Authorized Abbreviations shall be used on Technical Operations hardware and software.
- c. Abbreviations or words not found in the List of Authorized Abbreviations but in ASME Y14.38, or GPO Style Manual shall be submitted for FAA approval in accordance with section 5.2.

## 6 NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

### 6.1 Intended use

Requirements and design criteria covered by this standard are intended for use in acquisition of Technical Operations hardware and software.

### 6.2 Exclusions

This document does not—

- a. Include non-Technical Operations abbreviations defined or established in other standards such as those for scientific notations, units of measurement, mathematical terms, organization names, power distribution units, or units of time.
- b. Include visibility and legibility guidelines to include contrast, height, width, spacing and style of letters.
- c. Prescribe method of application to include carving and location of letters.
- d. Prescribe retrofitting fielded Technical Operations hardware and software.
- e. Apply to technical documentation to include technical instruction manuals, maintenance manuals, and training documentation, except as prescribed in section 4.3.
- f. Include abbreviations unique to a specific Technical Operations hardware and software.